WEATHER IN THE UNITED STATES

THE WEATHER ELEMENTS

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GENERAL SUMMARY

The temperature during the first two weeks of May was abnormally high in the eastern half of the country, while in the western half it was generally below the normal. However, during the remainder of the month, cool weather persisted throughout most sections with some very low temperatures for the season in the Eastern and Central States.

The precipitation for the month was below the normal in most regions east of the Mississippi River. In the Ohio Valley and some portions of the Atlantic Coast States, less than half the usual amounts were reported, while over a belt extending from the southern Appalachian Mountains to eastern Oklahoma and Texas more than twice the normal for the month was received, as was also the case in some central Rocky Mountain and southwestern sections, but the central Rio Grande Valley and much of the northern Plains and central Pacific coast areas were generally dry.

PRESSURE AND WINDS

The month opened with a low-pressure area north of the Red River Valley, with moderate precipitation and thunderstorms over much of the northern and central Great Plains and northeastward to the upper Lake region. Elsewhere generally fair weather prevailed, except local rains were received in southern California and extreme southern Florida. During the next three days, this low-pressure area moved southeasterly to the upper Lake region and easterly out the St. Lawrence Valley, and was accompanied by moderate precipitation in the great central valleys and to the northeast with many thunderstorms.

On the 3d, low-pressure areas moved in from the far Northwest and far Southwest, with light precipitation over most of the Pacific and Plateau regions, and by the next day the Southwest low area had merged with the one from the Northwest, which moved slowly eastward and was accompanied by light precipitation over much of the Plateau, Rocky Mountain and western Great Plains regions, with a few rather heavy thundershowers in the Southwest. This low area moved slowly over the upper Lake region and off the northeast coast by the 7th, and was accompanied by light precipitation.

A low-pressure area appeared in western Texas on the 6th, and moved to southwestern Iowa by the 7th, to central Minnesota by the 8th, and to the north of eastern Montana by the 10th, where it dissipated. It was accompanied in northern and central Texas by local high winds, tornadoes, rain, and hail. About 80 persons were killed and property of various kinds was materially damaged, while in portions of the Missouri and upper Mississippi Valleys moderate to heavy precipitation was received. During the first decade, little precipitation was received in most of the East and South, except occasional local rains in a few localities, while in the Pacific States moderate precipitation occurred on the 3d and 4th and again on the 6th and 7th.

On the 10th of the month, a low-pressure area developed in the Southwest, moved northeast and thence north to eastern South Dakota by the 13th, and thence easterly and out the St. Lawrence Valley by the 18th. This low area was accompanied by rather widespread precipitation, with some heavy falls in the Missouri and upper Mississippi Valleys, and also in some portions of the Atlantic and Gulf States. On the 15th, a low-pressure area developed in the Southwest, and moved northeasterly to the Ohio Valley by the 17th, and off the northeast coast by the 21st. Widespread precipitation, in places heavy, accompanied this low, and extended to the Gulf and Atlantic coasts on the 18th and 20th.

At the beginning of the third decade, a low-pressure area moved in from the Northwest and during the 21st and 22d overspread much of the Plateau, Rocky Mountain, and western Great Plains regions, and during the 23d and 24th moved over the Great Lakes and out the St. Lawrence Valley. Moderate to heavy precipitation fell in portions of the Rocky Mountains, the Missouri and upper Mississippi Valleys and Lake region. This low was followed by a rather extensive high area and generally fair weather, which continued until after the middle of the decade. During the remainder of the month the pressure was relatively low over much of the country, with moderate precipitation in many localities, but on the 29th and 30th some heavy rains occurred in portions of the Gulf and South Atlantic States. The month closed with high pressure and fair weather over the eastern half of the country, except light local precipitation was received in portions of the New England States, the Florida peninsula, and the Rio Grande Valley, while low pressure prevailed in the Rocky Mountain and Plateau regions, with light precipitation in the northern portions of the Plateau and Pacific States.

Chart VI and the insets of Charts II and III present the usual information as to the mean pressure of the month.

Severe local storms were reported in considerable number, as usually happens at this season of the year. The customary table of these storms may be found at the end of this section.

TEMPERATURE

The warm weather which had set in just before April ended continued over the eastern half and much of the Plains during the first decade and the early part of the middle decade. The interior portions of the North and Middle Atlantic States, the Ohio Valley, the Lake region, and the greater part of the upper Mississippi Valley had temperatures much above normal practically throughout this period. However, the West was experiencing cool weather for the most part, especially about the 5th to 10th.

The week ending the 20th brought a marked change in the temperature situation, for it was considerably cooler than normal in the north-central portion, the central valleys, and in substantially all parts of the Lake region, the Plains, and the middle and southern Rocky Mountain region. However, most of the Atlantic and Gulf States were warmer than normal, likewise the northern Plateau and the interior of the North Pacific States.

The final decade of May was a period of less-marked departures from normal temperature conditions, except that the last four days brought decidedly cool weather to the north-central and northeastern portions of the country and as far south as the southern Appalachians. This decade was mainly cooler than normal in the middle and southern Plains and everywhere to eastward and northeastward, likewise in the southern and middle

Plateau and the extreme Northwest; but it was somewhat warmer than normal over most of the middle and upper Missouri Valley and the northern Rocky Mountain region.

The month averaged warmer than normal almost everywhere east of the Mississippi River, and usually by 3° to 5° from southern New England to eastern Virginia. Portions of northwestern New York and of Tennessee averaged a trifle cooler than normal. West of the Mississippi River, much of Minnesota and of the west Gulf region, also a part of Montana, averaged warmer than normal; but otherwise the month averaged cooler than normal, particularly in North Dakota, the southern Plateau region, Nevada, and the interior of California. A number of points in Arizona or districts adjacent thereto had deficiencies of 4° or more per day.

The highest temperatures occurred usually about the 5th to 9th in the Lake region, the Ohio Valley, and to eastward, but about the 17th to 19th in parts of the South Atlantic States. For most of the Southwest the hottest weather came about the 19th to 21st, but the Northwest, the middle Plains, and the lower Mississippi Valley scored their highest marks about the 26th to 28th. The highest reading reported anywhere was 110° in southeastern California on the 19th.

The lowest readings occurred usually about the 6th to 12th in the Pacific States, the Southwest, and the middle Plateau and Mountain sections, usually the 16th to 18th in the northern and middle Plains and the upper Mississippi Valley, during the final week of the month in the Lake region, the central valleys, and to eastward and southeastward, except in a few Atlantic States on the 3d or 4th, or else about the 10th to 12th. The very lowest was 2° above zero, at an elevated station in Colorado, on the 6th.

PRECIPITATION

The amounts measured during May were noticeably greater, for most of the country, than the amounts of the earlier spring months had been. Out of 48 States, 25 averaged above the normal May quantities, only five below 60 per cent of normal, and none below 40 per cent of normal. Yet the distribution of the May precipitation was not good. Excessively large amounts were received in the lower Mississippi Valley, chiefly between the 5th and the 20th, while most of the Florida peninsula had very heavy downpours just before the month ended.

Compared with normal amounts the western half of the country received excesses more widely than the eastern half. A large proportion of the districts along and near the Mexican border had much more than the normal precipitation, and this was the case in Nevada likewise and most districts adjacent thereto. The drainage area of the Platte River was marked by excessive rains; also northeastern Texas. Considerable shortages, however, were noted in Montana, western North Dakota, and the Black Hills region, also in central New Mexico and a few other districts.

In the eastern half, decidedly less rain than normal was reported from southern Alabama and western Florida, and thence northeastward to Maryland and New Jersey, and from these States westward over all the upper Ohio Valley and most of the lower portion besides, also over eastern Missouri and the districts adjacent to Lake Michigan. Slightly more than normal was received over most of Minnesota and eastern Iowa, central and eastern New York, and northern New England. At the close of the first paragraph of this section, two areas of decidedly excessive falls were mentioned; in the former is located the station reporting the greatest amount for May, 1930, anywhere in the country, Moorhead, Miss., where 19.70 inches fell.

SNOWFALL

East of the Plains the snowfall was of small account in those Northern States which usually record some in May. In the West, however, many of the southern and central Mountain and Plateau States received greater snowfall than usual, Nevada and Arizona showing larger averages than in any previous May. At Phoenix, where even the winters pass nearly every time without a single flake of snow, there was a brief flurry on the morning of May 9.

RELATIVE HUMIDITY

In the central and southern portions of the Plateau and Rocky Mountain regions, much of the Great Plains, and the west Gulf region, the percentages of relative humidity were nearly everywhere above normal, but generally along the Pacific and in the northern portions of the Plateau and Rocky Mountain regions, and east of the Mississippi River, except a few stations in the Lake regions, the New England States, and the southern Allegheny region, humidity percentages were less than normal, though the negative departures were in most cases not large.

SEVERE LOCAL STORMS, MAY, 1930

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path (yards [1])	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Homer, Nebr.	1	5:10 p. m.	100		$1,500	Tornado	Small farm buildings damaged over path 5 miles long.	Official, U. S. Weather Bureau.
Bancroft, Nebr.	1	5:15 p. m.	5-40		40,000	do	Buildings on 6 farms demolished; path 7 miles	Do.
Mound City to Maitland, Mo.	1	5:30 p. m.	50-100			do	11 farms devastated	Do.
White Cloud, Kans., to Napier, Mo.	1	do				do	Buildings on 2 farms demolished; path 4 miles	Do.
Clay, Fayette, Harrison, Mitchell, Woodbury, Cerro Gordo, and Hamilton Counties, Iowa.	1	5:30-8 p. m.			48,400	9 tornadoes	No details of damage reported; some storms accompanied by hail.	Do.
Newton, Kans. (near)	1	5:40 p m.			6,000	Tornado	Farm buildings damaged; livestock killed; path 8 miles.	Do.
Wichita, Kans. (20 miles north of).	1	5:50 p. m.				do	No damage reported	Do.
Wayne, Lucas, and Monroe Counties, Iowa.	1	6-8:15 p. m.		1	144,200	3 tornadoes	Extensive damage to farm property and crops; 25 persons injured.	Do.
Dunavant, Kans., to Smithville, Mo.	1	6:15 p. m.	33-440	2	500,000	Tornado	About 50 farms damaged; 20 persons injured	Do.

[1] "Mi." signifies miles instead of yards.